Canadian Journal of Microbiology

Journal canadien de microbiologie

Volume 37, 1991
Author Index / Index des auteurs

Abdillahi, H., 613
Achouak, W., 195
Aguilar, G., 912
Ahmad, M.H., 609
Ahmed, Z.U., 59
Akhtar, A., 800
Akhtar, M., 650
Albertí, S., 270
Algorta, G., 325
Alt, S.G., 984
Amarger, N., 600
Amir, H., 889
Anagnost, S.E., 869
Antoun, H., 105, 158
Anwar, H., 590, 737
Araki, T., 840
Arias, J.M., 74
Armstrong, J.L., 703
Artsob, H., 329
Ashraf, M.M., 59
Ashton, F.E., 613
Babich, K., 624
Backman, P.A., 953
Balandreau, J., 195
Balatti, P.A., 542
Balish, E., 128, 204, 834
Bally, R., 195
Banerjee, P.C., 78, 692
Barran, L.R., 576
Bashan, Y., 958
Bastide, J.-M., 964
Battermann, G., 211
Beauchamp, C.J., 158
Beaudet, R., 573, 918
Bell, C.R., 34
Belliveau, B.H., 513
Benateya, A., 136
Benedí, V.J., 270
Bergan, A.S., 562
Berge, O., 195
Berghammer, H.A., 775
Bernalier, A., 484
Berthelet, M., 433
Bhattacharyya, S., 78
Bhattacharyya, S.C., 265
Bigwaneza, P.C., 105
Binotto, J., 474
Bisaillon, J.-G., 573, 918
Bleakley, B.H., 287
Boekhout, T., 188
Bollag, J.-M., 725
Bordeleau, L.M., 105
Bott, T.L., 848
Bowden, G.H., 368
Bracquart, P., 136
Bradley, D.E., 97, 751
Breton, A., 248
Bromfield, E.S.P., 576
Brust, R., 329
Buchanan, B., 877
Bulman, T.L., 440
Burleigh, S.H., 897
Butty, P., 964
Camprubí, S., 270
Canevascini, G., 459
Carrel, F.L.Y., 459
Castignetti, D., 654
Chakrabarti, B.K., 692
Chakrabarty, B.K., 78
Chakraborty, B.N., 858
Chan, Y.-K., 715
Chapatwala, K.D., 411
Chatfield, S., 568
Chatterjee, S.N., 265
Chauret, C., 744
Chauthaiwale, V.M., 713
Chen, Y., 377
Cheng, K.-J., 484, 554
Cho, H.J., 815
Chomik, M., 233
Chowdhury, M.A.R., 148, 800
Chrisp, C.E., 949
Cisalpino, E.O., 455
Claverie-Martín, F., 718
Cole, G.T., 637
Conner, D.E., 647
Cook, B.A., 758
Corbeil, L.B., 384
Cormier, M., 116
Corthier, G., 315
Costerton, J.W., 484, 737
Coutts, R.T., 791
Crawford, D.L., 287, 902
Croft, L., 171
Dahiya, J.S., 14
Dai, D., 122
Das, A., 78
Dawson, B.A., 504
Dawson, J.O., 897
de Araùjo Rangel, H., 455
Dean-Ross, D., 491
Denis, M., 253, 479
Deregt, D., 815
Deshpande, V.V., 713
Devenish, J., 317
Devor, K.A., 276
Díaz-Torres, M.R., 718
Dion, P., 158
Doane, F., 329
Donegan, K., 708
Dougan, G., 568
Doyle, J.D., 682
Duhaime, R., 504
Duncan, G.H., 218
Duncan, S.H., 484
Dykstra, C.C., 718
Dziadek, J., 419
Elmer, G.W., 315
Enger, Ø., 618
Engle, M., 624
Erdos, G.W., 445
Evjen, K., 562
Fages, J., 971
Falkow, S., 568
Farber, J.M., 647
Farrah, S.R., 445
Faull, J.L., 659
Ferguson, K.P., 722
Fieland, V.P., 703
Filutowicz, H., 204
Finlay, B.B., 568
Fletcher, J., 28
Foght, J.M., 924
Fonty, G., 484
Forsberg, C.W., 554
Fortin, J.A., 258
Foster, B.C., 504, 791
Funayama, S., 425, 549
Gacto, M., 974
Gálvez, A., 769
Gamian, A., 233
Garciá, J.M., 912
Gaucher, G.M., 86
Germida, J.J., 521, 780
Glass, T.L., 141
Glatz, B.A., 361
Glick, B.R., 796
Goksøyr, J., 618
Gomes, T.A.T., 407
Gonzalez, F., 74

Gonzalez, R.G., 984
Gordon, C.L.A., 609
Graeme-Cook, K.A., 659
Grayston, S.J., 521
Gregg, E.O., 479
Gruhn, U., 355
Gunning, B.E.S., 171
Guth, B.E.C., 407
Haas, B., 654
Hackman, P., 188
Hamana, K., 350, 885
Hamilton, I.R., 368
Hanau, R.M., 165
Hannan, P.J., 933
Hartmann, A., 600
Haselwandter, K., 775
Hashiguchi, Y., 312
Heldal, M., 562
Herr, L.J., 339
Hertel, G., 287
Heulin, T., 195
Hoben, H.J., 497
Holmes, A.R., 226
Holzmann, H.-P., 775
Hong, Y., 796
Howard, S.P., 97
Hu, Y.J., 554
Huq, A., 800
Husevåg, B., 618
Huitrón, C., 912
Ichiman, Y., 404
Ijzerman, M., 633
Indrati, R., 803
Ishiguro, E.E., 122
Iwamoto, Y., 312
Jaklitsch, W.M., 823
Jaworski, A., 419
Jayaswal, R.K., 880
Jensen, R.A., 276
Jorge, J.A., 675
Jouvert, S., 964
Kaattari, S.L., 758
Kagawa, H., 7
Kalbfleisch, J.H., 722
Kálmán, E.T., 391
Kaplan, L.A., 848
Kapoor, M., 858
Karstens, R.H., 450
Keplinger, J.L., 722
Kevei, F., 391
Khachatourians, G.G., 534, 933
King, R.J., 682
Kjeldstad, B., 562
Kloepper, J.W., 158, 633, 953
Knowles, R., 744
Kobayashi, H., 397
Kockerols, M., 295
Kokko, E.G., 697
Kope, H.H., 258
Korhonen, L.K., 530
Koshinsky, H.A., 933
Kosir, J.M., 534
Koumoto, Y., 148
Koury, M.C., 455
Krishnan, H.B., 542
Kubicek, C.P., 823
Kudo, H., 484
Kundu, P.N., 78
Kuriyama, H., 397
Kuroda, M., 148
Kushner, S.R., 718
Labbé, R.G., 19
Laborde, H.F., 325
Lackner, R., 665
Lacy, M.L., 669
Laddaga, R.A., 624
Laferrière, C.A., 233
Lambe, Jr., D.W., 722
Lapeña, M.A., 974
Le Guyader, F., 116
Leggett, M.E., 42
Legnani-Fajardo, C., 325
Lépine, F., 573
Letarte, Y., 64, 465
Leung, K.Y., 568
Lewinson, L., 497
Lifshitz, R., 158
Linden, G., 136
Lior, H., 97
Litster, D.L., 791
Lizama, H.M., 182, 304
Lodge, B.A., 504
López-Lara, I., 769
Lopez-Llarca, L.V., 218
Łukomski, S., 419
Lux, B., 971
Lynn, K.T., 637
Maas, L.K., 141
Machado, H.B., 549
MacLachlan, P.R., 474
MacLeod, R.A., 433
MacPherson, J.M., 534
Magnuson, T.S., 287
Mahaffee, W.F., 953
Mallié, M., 964
Mamer, O., 276
Mancino, L., 613
Mandal, J.C., 265
Manocha, M.S., 377
Maqueda, M., 769
Marshall, D.L., 594
Martikainen, P.J., 530
Martínez-Bueno, M., 769
Maruscik, D.A., 939
Masri, S.A., 815
Masuzawa, T., 312
Masy, C.L., 295
Matsuo, K., 7
Matsusaka, N., 581, 586
Matsuzaki, S., 350, 885
Matyac, C., 708
McCarthy, G., 978
McFarlane, M.J., 42
McFeters, G.A., 785
McGilveray, I.J., 504
McInroy, J.A., 953
McKee, A.S., 368
McLoughlin, T.J., 984
McNaughton, G.S., 226
Mesbah, A., 484
Messner, K., 665
Mestdagh, M.M., 295
Mew, T.W., 764
Mitsumori, M., 581
Mitsuyama, M., 244
Montès, B., 964
Monti, R., 675
Montoya, E., 74
More, R.D., 226
Morita, T., 312
Moskaluk, E.R., 697
Murphy, E., 654
Murphy, P.A., 361
Murray, R.G.E., 1
Nagai, S., 7
Naito, J., 803
Nakamura, R., 312
Nakano, T., 148
Nawaz, M.S., 411
Nelson, B., 978
Nielsen, K., 384
Nishimura, E., 581
Nissen, H., 562
Nolette, N., 368
Nomoto, K., 244
Nomoto, K., 244
Numan, Z., 509
Nunley, J.W., 808
Ogilvie, K.K., 258
Ohmann, H.B., 815
Ohta, Y., 803
Olsen, P.E., 430

Olsen, R.H., 682
Omoe, K., 586
Ortner, M., 775
Palmisano, A.C., 939
Panaccione, D.G., 165
Paradkar, A.S., 333
Pardo, C., 974
Park, K.B., 19
Park, W.S., 361
Pasternak, J.J., 796
Pasti, M.B., 902
Patel, G.B., 110
Patterson, N.A., 858
Payment, P., 154
Pedrosa, F.O., 425, 549
Peterson, J.B., 321
Petzold, H., 355
Phaneuf, M., 637
Pinel-Alloul, B., 64, 465
Plazinski, J., 171
Pommepuy, M., 116
Pontefract, R., 647
Poolman, J.T., 613
Poot, G., 188
Porteous, L.A., 703
Prévost, D., 105
Pueppke, S.G., 52, 542
Radler, F., 211
Ramey, W.D., 34
Rastogi, V., 576
Reeves, C., 86
Regué, M., 270
Remacle, J., 875
Renato de Freitas, J., 780
Rice, E.W., 908
Rice, W.A., 430
Richard, C., 195
Rigo, L.U., 425, 549
Roberts, D.P., 168
Rockey, D.D., 758
Rolfe, B.G., 171
Romero-Severson, J., 984
Ronen, Z., 725
Rosendal, S., 317
Roy, R., 233
Różałski, A., 419
Ryan, A.J., 613
Sack, D.A., 59, 800
Sakthivel, N., 764
Salkowski, C.A., 128, 834
Salminen, S.O., 238
Samad, S.A., 265
Sanderson, K.E., 474
Sauriol, F., 276
Scher, F.M., 633
Schmidt, E.L., 828
Schmidt, R.H., 594
Schrumpf, M.E., 450
Schwab, B.S., 939
Schwan, T.G., 450
Scrutton, M.C., 823
Seech, A.G., 440
Seidler, R.J., 682, 703, 708
Sekla, L., 329
Serwecińska, L., 419
Seshan, K.R., 637
Shadix, L.C., 908
Shea, C., 808
Sheets, C.J., 168
Shepherd, M.G., 226
Shimizu, T., 312
Shinagawa, K., 581, 586
Shinoda, S., 148
Short, K.A., 682
Simpson, W.J., 450
Sinha, R.P., 281, 488
Sivasithamparam, K., 42
Skinner, J.S., 624
Smith, D.C., 554
Smith, G.B., 730
Smith-Simerville, H.E., 808
Smorczewski, W.T., 828
Solomonraj, G., 504
Somasegaran, P., 497
Souza, E.M., 425
Speirs, J., 877
Speirs, J.I., 647, 650
Sprott, G.D., 110
Srebotnik, E., 665
St-Arnaud, S., 918
Stackebrandt, E., 1
Stackiw, W., 329
Staczek, P., 419
Starodub, M.E., 513
Stavric, S., 877
Steensma, H.Y., 188
Stein, D.C., 345
Stewart, C.S., 484
Stotzky, G., 682
Strap, J.L., 737
Streeter, J.G., 238
Struble, J., 978
Stuttard, C., 333
Suganuma, M., 404
Sugii, S., 581, 586
Suzuki, I., 182, 304
Suzuki, R., 312
Talbot, J.A., 384
Tarshis, M., 477
Taylor, R., 171
Terenzi, H.F., 675
Terzieva, S.I., 785
Thomas, B.H., 504
Tiberio, R., 276
Tilley, M., 949
Tipping, E.M., 633
Tomás, J.M., 270
Toth, K.F., 669
Traquair, J.A., 697
Trejo, B.A., 912
Trevors, J.T., 440, 513
Tsantrizos, Y.S., 258
Turaga, P.S.D., 758
Umeda, I., 397
Upadhyay, R.S., 880
Upton, S.J., 949
Usui, Y., 404
Valdivia, E., 769
Varga, J., 391
Vargas, A., 74
Venables, W.A., 509
Ventullo, R.M., 939
Vercheval, C., 875
Vieira, M.A.M., 407
Vining, L.C., 333
Visintin, L., 880
Vyas, P.R., 713
Walter, M.V., 703
Wang, C.J.K., 864, 869
Wang, I.-K., 86
Wang, Z., 287
Westlake, D.W.S., 924
Wheatcroft, R., 576
Whitwill, S.T., 576
Wiens, G.D., 758
Wijetunga, C., 28
Wilson, D.L., 504
Wimpenny, J.W.T., 509
Wollum, II, A.G., 730
Worrall, J.J., 864, 869
Yamada, T., 7
Yamaguchi, R., 7
Yamamoto, S., 148
Yamazaki, A., 7
Yanagihara, Y., 312
Yang, Z., 165
Yokokura, T., 244
Yoshida, K., 404
Yoshikai, Y., 244
Zablotowicz, R.M., 633
Zamecnik, J., 504, 791
Zamir, L.O., 276

Zavarzin, G.A., 1
Zdor, R.E., 52
Zheng, Q., 171
Zollinger, W.D., 613
Zunino, P., 325
Zwaenepoel, P., 248

Canadian Journal of Microbiology

Journal canadien de microbiologie

Volume 37, 1991
Subject Index / Index des matières

2,4-dichlorophenoxyacetate, 682
4-methylumbelliferyl β-D-glucuronid, 908
^{31}P-NMR, 562
abundance, 64
acetronitrile, 411
acid phosphatase, 74
acid rain, 491
Acidiphilium cryptum, 78, 692
Acidiphilium symbioticum, 78, 692
acidophilic bacteria, 78, 692
Actinobacillus pleuropneumoniae, 317
actinorhizal, 897
ADH1-deficient mutant, 803
ADH2-deficient mutant, 803
adhesion, 692, 730
agglutination kits, 877
agglutinin, 377
Agrobacterium, 34
Alcaligenes, 158
Alcaligenes eutrophus CH34, 875
Alcaligenes sp., 725
alcohol dehydrogenase, 803
alkaline phosphatase, 74
aminopropylcadaverine, 350
aminopropyltransferase, 350
ammonia oxidation, 918
ammonia oxidizers, 828
ammonium assimilation, 226
ammonium excretion, 549
ammonia-oxidizing bacteria, 918
Anabaena azollae, 171
anaerobic metabolism, 725
anaerobic rumen fungi, 484
anastomosis, 339
antagonism, 880
antibacterial, 445
antibiotic resistance, 513
antibiotics, 659
antibody response, 204
antifungal, 258
antigen F, 758
antigenic changes, 450
antigenic stability, 368
antigenicity, 325
Apicomplexa, 949
Apiotrichum curvatum, 361
arbovirus, 329
Arctic, 105
asexual development, 165
Aspergillus, 391, 858
Aspergillus niger, 823
Aspergillus sp. CH-Y-1043, 912
asymptomatic carrier, 618
attached bacteria, 491
attachment, 377, 647
attachment inhibition, 484
autoregulation, 542
Azolla, 171
Azospirillum, 958
Azospirillum brasilense, 549, 744
Azotobacter, 321
β-D-glucuronide, 908
β-glucosidase inhibition, 459
Bacillus, 513
Bacillus polymyxa, 775
Bacillus pumilus, 978
bacillus subtilis, 953
bacterial diversity, 1
bacterial evolution, 1
bacterial flora, 116
bacterial kidney disease, 758
bacterial pretreatment, 730
bacterial viruses, 154
bacteriocin, 764, 769
bacteriolysis, 122
bacteriolytic, 769
bacteriophage, 751
bacteriophages, 97, 270
bacterioplankton, 64, 465
bacterioplankton–phytoplankton relationships, 64
Bacteroides intermedius, 368
bacteroids, 238
bandages, 445
basidiospore, 697
Beauveria bassiana, 534
beige mice, 128
beneficial bacteria, 958
benzoate, 573
beta-oxidation, 361
binucleate *Rhizoctonia*, 339
biocontrol, 780
biodegradation, 411, 440, 939
biofilm, 737, 918
biofouling, 808
bioinsecticide, 534
biological control, 258, 764
biomineral, 978
biotransformation, 504, 791
biovars, 34
biphenyl, 411
Bordetella pertussis, 590
Borrelia burgdorferi, 450
bovine viral diarrhea virus, 815
Bradyrhizobium japonicum, 238, 984
calcium, 397
calcium induction, 295
calcium requirement, 317
Campylobacter coli, 530
Campylobacter jejuni, 530
Candida, 964
Candida albicans, 226, 637
Candida guilliermondii, 803
candidiasis, 204
canola, 521
capsule, 834
carbohydrate utilization, 477
carbon dioxide, 933
carboxylation, 573
Casuarina, 897
catalase, 361
cation, 397
celery, 669
cell-associated exopectinase, 912
cell surface, 377
cell surface antigen, 404
cellobiose transport, 141
cellulase biosynthesis, 459
celluiolysis, 484, 554
cellulolytic bacteria, 848
Chaetomium globosum, 869
Chainia, 713
chalcopyrite, 692
chemostat, 509, 737
chemostat culture, 368
chlamydospores, 637
chorismate, 276
citric acid production, 823
Clostridium, 154
Clostridium difficile, 315
Clostridium perfringens, 19
CO_2, 238
cobalt, 110
coccidia, 949
cold-shock proteins, 840
cold-water vibriosis, 618
colicin, 97, 751

coliphages, 154
colitis, 315
Colletotrichum, 165
colonisation ability, 659
competition, 116, 509, 530, 730
competitiveness, 576
complement fixation test, 455
complementation cloning, 425
conidia, 165
conidiogenous cell, 165
conifers, 34
correlation, 465
cotton, 953
crown gall, 34
cryptococcosis, 128
Cryptococcus neoformans, 128, 834
Cryptosporidium parvum, 949
Culex tarsalis, 329
Cunninghamella echimulata, 504, 791
cyanobacterium, 171
cyclophosphamide, 312, 637
cysteine proteinase, 384
cytokines, 253
Cytophaga, 885
cytotoxin, 650
D value, 609
DAPI, 562
decarboxylase, 350
decolorization, 902
decomposition, 848
decontamination, 708
degradation, 902
degradative plasmids, 924
Deleya, 808
Deleya aesta, 433
denitrification, 744
denitrifying bacteria, 725
dermatophytes, 964
detritus, 848
diagnosis, 407
diagnostic, 455
diazotroph, 425
digestion inhibition, 484
diversity, 600
DNA, 188
DNA probes, 407
drinking water, 154
dye, 902
ecological selection, 1
ecology, 600, 682
ectomycorrhizal, 258
electron and X-ray microscopy, 562
electroporation, 474, 858
elemental sulfur, 521
ELISA, 650
endoxylanase, 675
enteric viruses, 154
enterococci, 609
Enterococcus faecalis, 769
enterohemorrhagic, 97
enteropathogens, 407
enterotoxin D, 586
enterotoxins, 581
entomopathogen, 534
environmental conditions, 270
environmental factors, 880
enzyme compartmentation, 823
enzyme purification, 675
epitope, 7
Escherichia coli, 116, 244, 509, 650, 718, 877, 908
ethylenediamine resistance, 549
extracellular polysaccharide, 52
extreme acidic pH pectinase production, 912
Fibrobacter (Bacteroides) succinogenes, 141
Fibrobacter succinogenes, 554
field population, 600
field release, 708
field trials, 984
filamentous fungi, 534
fimbriae, 325
fish pathogen, 618
flagella, 325
Flavobacterium, 158, 440, 885
flocculation, 295, 397
fluorescence, 562
fluorescent antibody, 618
fluorescent pseudomonads, 42
fluorouracil, 244
foreign body, 722
formulation, 632
Frankia, 897
Fribobacter (Bacteroides) succinoge, 141
fungal parasites, 218
fusarium yellows, 669
fusion protein, 7
Gaeumannomyces graminis var. *tritici*, 42
galactokinase, 136
galactose, 136
gastrointestinal candidiasis, 637
gene exchange in soil, 703
genetically engineered microorganisms, 682, 708
genetics, 474
Geotrichum lactis, 974
GLC analysis of phenazopyridine, 504
gliding, 808
glucose, 105
glutamine synthetase, 549
Glycine max, 958
glycoproteins, 377
glycosidases, 168
glyoxylate cycle, 361
gnotobiotic mice, 315
gram-negative isolates, 971
granule, 562
growth media, 800
growth medium, 718
growth temperature, 800
guinea pig, 949
gyrase, 345
$H_2{}^{18}O$, 276
Halococcus, 350
hay, 248
heat attenuation, 713
heat-labile enterotoxin, 877
heat resistance, 609
heat-shock proteins, 840
heating, 248
heavy metal resistance, 491
hemagglutinin, 233, 758
hemicellulase, 675
hemolysin, 317
hemolysis, 647
hemolytic activity, 419
Herbaspirillum seropedicae, 425
Heterodero avenae, 218
HFPCcl3, 897
homospermidine, 885
host defense proteins, 384
HPLC analysis of phenazopyridine, 504
Humicola grisea, 675
hybridization, 391, 924
hydrolysis of lactose, 136
hydrophobicity, 692
hydroxyputrescine, 885
immune response, 590
immunoblot, 430
immunodeficient mice, 834
immunogold–silver staining, 665
immunosuppression, 312
in situ conjugation, 703
in situ pectinase detection, 912
indigenous infection, 244
indigenous populations, 576
inflammation, 128
influenza A virus, 233
inhibitor, 233
inhibitors, 350
injury, 785
insertion element, 576
interferon, 233

interferon-gamma, 479
interleukin-6, 479
intracellular, 568
invasion, 697
iron, 737
iron pyrite, 692
isochorismate, 276
isochorismate synthetase, 276
isoenzyme analysis, 391
isolation, 270
Itersonilia, 188
karyotyping, 188
kinetics, 182
Kebsiella pneumoniae, 270
Kluyveromyces marxianus, 933
λgt*WES*λB, 554
Lactobacillus, 211
lactococci, 281
lactose-fermenting revertants, 281
lactose-negative mutants, 281
lake sediments, 828
leaf litter, 939
Leptosphaeria, 858
Leptospira interrogans, 312
Leuconostoc, 211
light induction, 165
lignin, 287
ligninase secretion, 665
lignocellulose, 902
lipid, 361
Listeria monocytogenes, 253, 594, 647
Lyme disease, 450
lysogenic κ phage, 265
lytE, 122
macrophages, 253, 479
magnesium ammonium phosphate hexahydrate, 978
maize, 195
Malassezia, 964
malic enzyme, 211
malolactic enzyme, 211
manganese nodule, 692
Manitoba virus, 329
marine bacteria, 433
marine sediment, 513
membrane potential, 958
membrane transport, 433
meningococcal serotypes, 613
mercury resistance, 624
metabolic load, 796
metabolite uptake, 238
metal-binding protein, 875
metal resistance, 513
methanogenesis, 110
methanogenic conditions, 573
methanol extract, 455
Methanosaeta concilii, 110
methylcobalamin, 110
mice, 244, 312
microcosms, 848
milk proteolysis, 594
mineral leaching, 304
moisture, 869
mollicute, 28
molybdenum, 744
monoclonal antibodies, 581, 586, 815
monoclonal antibody, 430
monoclonal IgM antibody, 404
morphological variation, 808
most probable number, 918
motility, 52, 647
mouse, 949
mucoid *Pseudomonas aeruginosa*, 654
Mucorales, 355
mucosal candidiasis, 204
multifunctional enzyme, 86
multiplication, 568
murine candidiasis, 204
mutagenesis, 764
mutants, 136, 659
mutation loci, 333
Mycobacterium avium, 479
mycoflora, 248
mycoparasitism, 355, 377
mycotoxin, 86
Myxococcus xanthus, 74
naftifine, 964
NAH plasmid, 924
nalidixic acid, 59
naturally infested soil, 218
Neurospora, 858
nif regulation, 425
nitrate-nonutilizing mutants, 669
nitrate reductase, 744
nitrification, 828
nitrifiers, 828
nitrite reductase, 744
nitrogen, 42, 226
nitrogen fixation, 195, 321, 715, 796
nitrogen fixation gene, 425
nitrogenase, 775
nodulation competition, 52
nodule initiation, 542
nodule regulation, 542
nojirimycin, 459
nonpathogenic, 647
norspermidine, 148
nutrients, 864
nutrition, 168
O antigen, 97, 751
octopine, 158
oleaginous, 361
osmophily, 864
outer-membrane antigens, 368
outer-membrane profiles, 368
outer-membrane proteins, 590, 737
oxidation, 182, 304, 521
oxygen inhibition, 775
oxygen regulation, 321
Paracoccus denitrificans, 744
pathogenesis, 128, 568
pectic enzymes, 974
Penicillium, 86, 858
pentachlorophenol, 440
peptidoglycan, 122
periphyton, 939
peroxidase, 287
peroxisomes, 361
Petromyces albertensis, 14
pH changes, 477
Phanerochaete chrysosporium, 665
Phaseolus acutifolius x Phaseolus *vulgaris* hybrids, 497
phenazopyridine, 504
phenol, 573
phosphenolpyruvate-dependent sugar transferase system, 477
pIJ702 restriction modification, 713
Piptocephalidaceae, 355
Pisolithus, 258
plant–bacteria interaction, 958
plant growth promoting rhizobacteria, 521, 632, 796
plasmid, 59, 509, 513, 751
plasmid DNA, 281
plasmids, 171
plate matings, 703
Plesiomonas, 800
polyacrylamide gel electrophoresis, 669
polyamine, 885
polyamines, 148, 350
polycyclic aromatic hydrocarbons, 924
polygalacturonase, 974
polyketide synthetase, 86
population dynamics, 848
predation, 530
production, 64
productivity, 465
protease, 19
protease III, 718
protection, 404
protective antigen, 312

protein, 397, 751
protein secretion, 718
proteinase, 758
proteins, 815
Proteobacteria, 1
Proteus mirabilis, 325
Proteus penneri, 419
pseudomembranous colitis, 315
Pseudomonadaceae, 158
pseudomonads, 780
Pseudomonas, 632, 715, 796
Pseudomonas aeruginosa, 411, 737
Pseudomonas cepacia, 880
Pseudomonas fluorescens, 594, 953
Pseudomonas putida, 682
psychrophile, 840
psychrotroph, 715
pyochelin, 654
pyoverdine, 654
pyridine, 725
pyrite, 182
pyruvate carboxylase, 823
Rahnella aquatilis, 195
rearrangement, 276
recombinant, 287
relationships and processing, 815
removal, 154
Renibacterium salmoninarum, 758
repeat sequence, 7
reproductive secretions, 384
resistant tail, 609
respiration, 433, 775
restriction and modification, 345
restriction fragment length polymorphism, 534
reversibility, 775
rhabdovirus, 329
rhizobacteria, 158, 953
rhizobia, 730
rhizobial requirements, 497
Rhizobium, 52, 105, 430
Rhizobium inoculant analysis, 430
Rhizobium meliloti, 576, 600
rhizoctonia crown rot, 339
Rhizoctonia solani, 780
rhizoplane, 971
rhizosphere, 195, 521, 632
rhizosphere bacteria, 958
rice, 764
risk control, 708
root colonization, 632, 953
rumen bacteria, 141
rumen bacterium, 554
Saccharomyces boulardii, 315
Saccharomyces cerevisiae, 295
Salmonella, 474
Salmonella chloeraesuis, 568
scanning electron microscopy, 218
seawater, 116
secondary metabolism, 86
sediment, 116
sediments, 939
seed yield, 984
sequence-specific uptake, 345
serology, 28
seston, 939
Shigella, 59
shigellosis, 59
sialic acid, 233
siderophores, 654, 780
signal sequence, 718
size class, 465
smhA, 122
sodium, 110, 433
soft rot, 864
soil, 287, 440, 682
soybean, 958
spatiotemporal variations, 64
species diversity, 491
Sphingobacterium, 885
Spiroplasma, 28, 477
spores, 19
sporulation, 19, 897
Staphylococcus aureus, 581, 586
Staphylococcus aureus plasmid, 624
Staphylococcus epidermidis, 404
Staphylococcus lugdunensis, 722
Staphylococcus schleiferi, 722
stool blots, 407
streams, 939
Streptococcus thermophilus, 136
Streptomyces, 287, 713, 902
Streptomyces venezuelae, 333
struvite, 978
subtypes, 613
subunit vaccine, 7
sugar beet, 339
sugars, 377
sulfate conjugate, 504
sulfide ores, 304
sulfur, 182
sunflower, 971
surface antigens, 590
surface proteins, 28
survival, 530, 785
sutures, 445
swine waste, 918
symbiosis, 105, 171
symbiotic effectiveness, 576, 600
Syncephalis, 355
synergism, 933
taxonomy, 148, 188
temperature, 715
Thiobacillus, 304
Thiobacillus ferrooxidans, 78
Thiobacillus thiooxidans, 182
TOL plasmid, 924
Torulopsis, 964
toxicity model, 791
transconjugants, 703
transformation, 474, 713, 796, 858
translocation, 864
transmission electron microscopy, 697
transport, 105
tranylcypromine, 791
Trichoderma harzianum, 659
Trichoderma viride, 880
trichothecene mycotoxins, 933
Tritichomonas foetus, 384
Triton X-114, 28
tryptophan auxotrophs, 333
tryptophan biosynthesis genes, 333
tubing, 445
tungsten, 744
Verotoxin, 97
Vibrio, 148
Vibrio cholerae, 265
Vibrio sp. strain ANT-300, 840
Vibrionaceae, 148
virulence, 568
water, 530, 785, 908
Weigle mutagenesis, 265
Weigle reactivation, 265
wheat, 42, 195
whooping cough, 590
winter wheat, 780
wood decay, 864, 869
D-xylulose, 14
X-ray inactivation, 265
Xanthomonas oryzae pv. *oryzae*, 764
xenobiotics, 939
xylanase, 675
xylanase gene, 554
xylitol, 14
yeast, 295, 397
zinc, 491, 875
Zygomycetes, 355